Biology of the California Condor

Classification

The California condor, *Gymnogyps californianus*, is a member of the family Ciconiidae, or "New World vultures." The closest living relative is the Andean condor, *Vultur gryphus*, found in South America. Other members of the family include the turkey and black vultures. Originally classified in the order Falconiformes with eagles, hawks, falcons and Old World vultures, the New World vultures have recently been shown to be more closely related to storks and belong in the order Ciconiiformes.

Range

During the Pleistocene Era, ending 10,000 years ago, the condor's range extended across much of North America. At the time of the arrival of pioneers, the condor ranged along the pacific coast from British Columbia south through Baja California, Mexico. By 1940 the range had been reduced to the coastal mountains of southern California with nesting occurring primarily in the rugged, chaparral-covered mountains, and foraging in the foothills and grasslands of the San Joaquin Valley. Today condors are being reintroduced into the mountains of southern California north of the Los Angeles basin, in the Big Sur vicinity of the central California coast, and near the Grand Canyon in Arizona.

Habitat

California condors require large areas of remote country for foraging, roosting, and nesting. Condors roost on large, trees or snags, or on isolated rocky outcrops and cliffs. Nests are placed in shallow caves and rock crevices on cliffs where there is minimal disturbance. Foraging habitat includes open grasslands and oak savanna foothills that support populations of large mammals such as deer and cattle. Condors may fly 150 miles a day in search of food.

Description

Color: Males and females are similar in appearance. Adult condors have a mostly baldhead and neck. The skin of the head and neck is colored in shades of pink, red, orange, yellow, and light blue; becoming more intensely pink/orange during times of excitement and in the breeding season. Feathers are mostly black except for white under wing linings. Juvenile birds have dusky black heads and bodies with limited white under wing linings. At hatch, chicks have light pink and orange skin and are covered in off-white down which is quickly replaced by gray down.

Size: California condors have a wingspan of about 9.5 feet. Adult condors stand at a height of 45-55 inches and weigh 17 to 25 pounds. Males are generally slightly larger than females.

Talons: Unlike birds of prey, condors do not have sharp talons capable of killing or grasping objects.

Beak: The condor's beak is long, sharp, and powerful. It can pierce the hide of a horse. Condors use their beaks to tear the flesh from carcasses, and to touch, feel, and explore their surroundings. Condors have been observed using their beak to remove foliage from trees to create better roosting sites, and manipulating rocks and other objects in caves to improve the nesting area.

Crop: The crop is a pouch like enlargement below the throat where food is stored and partially digested before it enters the stomach. In one feeding an adult California condor can take in as much as 3 to 4 pounds in its crop. A crop can be seen as a bulge in the upper chest area of a condor.

Senses: Condors have keen eyesight to help them spot food from great heights. The color of their iris changes from tan to red as the bird matures. Condors do not have a good sense of smell and do not use it to locate food, as do turkey vultures. California condors have good hearing.

Voice: The condor has no syrinx (voice box), but communicates with a combination of hisses, growls, and grunts. There is also a well-developed system of communication through body language.

Air sacs: Condors have air sacs located under their skin in their neck and throat regions. When agitated or excited they inflate these sacs which gives them a larger more impressive appearance.

Life span: It is not known how long condors live, however the oldest California condor in captivity was born in 1966. An Andean condor in a zoo in Italy died recently at 71 years of age. Scientists believe that condors in the wild did not live too much over 40 years of age.

Breeding

Maturity: California condors reach sexual maturity when they are 5 to 7 years of age.

Courtship: Male condors repeatedly performs highly ritualized courtship displays to the female, standing with his wings partially held out, head down, and neck arched forward; he turns slowly around, rocking from side to side. The pair also performs graceful acrobatic flights, where one partner follows the other. Condor pairs stay together over successive seasons, however, if one partner is lost, a new partner will be sought.

Nesting: Nests are usually placed in caves on the face of steep cliffs. Two cavity nests were discovered in holes at the top of giant sequoia trees. No nesting material is added.

Eggs: The female lays a single pale aqua-colored egg, which initially weighs approximately 280 grams (10 ounces) and measures 110 x 67 mm (4.4 x 2.7 inches). If an egg is lost to breakage or predators, the pair will often produce a replacement egg in 4 to 5 weeks, a practice known as "double clutching".

Incubation: Parents alternate incubating the egg, each often staying with the egg for up to several days at a time.

Chicks: The chick hatches after 54 to 58 days of incubation. The parents share duties in feeding and brooding (warming) the chick. Chicks are fed partially digested food regurgitated from the adult's crop. Flight feathers are fully developed at about six months of age. The chick is dependent on its parents for one to two years as it learns to forage and feed on its own in the wild.

Other Behaviors

Feeding: Condors do not kill for food; they are carrion eaters and prefer to feed on the carcasses of large mammals including deer, marine mammals such as whales and seals, and cattle. A condor may eat up to 3 to 4 pounds at a time and may not need to feed again for several days. Condors find their food by sight or by following other scavenging birds. Condors normally feed in a group where a strict dominance hierarchy is followed. Dominant birds usually eat first and take the choicest parts of the carcass.

Bathing: Condors are fastidious birds; after eating they bathe in rock pools and will spend many hours preening and drying their feathers. If no water is available they will clean their heads and necks by rubbing them on grass, rocks, or tree branches.

Roosting: Condors spend most of their time perched, sunning and preening. Condors roost where they can easily launch themselves into flight with just a few wing beats. Roost sites include large trees, snags, cliffs, and rocky outcrops. Condors will often roost in groups and will return to the same roost sites year after year. Dominant birds often take the choice position in a group roost.

Flight: California condors can soar on warm thermal updrafts for hours, reaching speeds of more than 55 miles per hour and altitudes of 15,000 feet. Flights up to 150 miles in a day have been recorded. Condors hold their wings in a horizontal position and fly very steadily, unlike that of turkey vultures which fly with their wings held in a V-shape and appear to be unsteady or "wobbly."

Playing: Condors are highly intelligent, social birds. They are inquisitive and often engage in play, especially immature birds. They will entertain themselves at length with feathers, sticks, and grass, often playing tug-of-war, tossing, chasing, and retrieving the objects. This activity is especially pronounced around water holes.